

Notice of Allowability

Application No.

10/828,814

Examiner

Rip A. Lee

Applicant(s)

SCHOTTEK ET AL.

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to April 12, 2007.
2. ☒ The allowed claim(s) is/are 1-28 and 30-72.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

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|-----------------|---|
| Claim 9, line 7 | insert a comma after "40 carbon atoms" |
| Claim 9, line 7 | delete "or" which appears after "40 carbon atoms" |
| Claim 9, line 8 | insert "or" after "40 carbon atoms" |

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance: Claims 1-28 and 30-72 are allowed over the closest references cited below.

The present invention is drawn to a composition comprising a mixture of racemic and meso isomers of metallocene compounds of the general formula $R^9L^1L^2M^1R^1R^2$, wherein the mixture of racemic and meso isomers has a weight ratio of racemic to meso isomers of greater than 5:1 *as synthesized*; see claim for full structural details. It is understood from the instant specification that the term "as synthesized" refers to the material isolated from the reaction mixture without any subsequent separation of isomers. As elucidated in prosecution, this includes fractional crystallization and extraction methods. The salient feature of metallocene compounds of general formula $R^9L^1L^2M^1R^1R^2$ include: Structural bridge R^9 contains substituents R^{40} and R^{41} . When R^{40} and R^{41} are the same, they include a cyclic or non-cyclic alkyl group having from 2 to about 30 carbon atoms, an alkenyl groups having from about 3 to about 10 carbon atoms, an alkylaryl or arylalkyl group of from 7 to about 40 carbon atoms. When R^{40} and R^{41} are different, either one of R^{40} and R^{41} includes a cyclic or non-cyclic alkyl group having from 4 to about 40 carbon atoms and the other R^{40} and R^{41} includes a cyclic or non-cyclic alkyl group having from 1 to about 40 carbon atoms. Notably, these definitions exclude metallocenes containing ubiquitous Me_2Si , Ph_2Si , and $(Me)(Ph)Si$ bridging groups.

The closest references cited to date are Yamazaki *et al.* (U.S. 6,184,402), Rix *et al.* (U.S. 6,960,676), Thiele *et al.* (U.S. 5,945,367), and Winter *et al.* (U.S. 6,365,763). While the references teach isomeric mixtures of metallocene compounds having structural features that satisfy the parameters set forth in the claims, none of the references discloses mixtures of racemic and meso isomers wherein the weight ratio of racemic to meso isomers of greater than 5:1 as synthesized. In all cases, a subsequent step is required to enrich the rac/meso ratio.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

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July 5, 2007



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